

Serial No. 09/872,346

Response to Office Action dated March 31, 2003

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This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

*Sub B17*  
Claim 1: Withdrawn.

*a 10*  
Claim 2 (Currently Amended): A shift control device attachable to the a handlebar of a bicycle for controlling the piston of a master cylinder adjusting a slave piston of a slave cylinder assembly of a hydraulic shift gear mechanism, the shift control device comprising:

    a bracket attachable to the handlebar;  
    a pivot shaft spaced apart from the handlebar and fixedly secured to the bracket;  
    a rotating member rotatable in a first direction and a second direction about the pivot shaft;  
    a control lever operatively connected with the rotating member and biased in a neutral position;  
    a push mechanism configured to cooperate with and rotate the rotating member in the first direction; and  
    a return mechanism configured to cooperate with and rotate the rotating member in the second direction;  
    a master cylinder assembly having a master piston connected to the push and the return mechanisms; and  
    an adjusting piston adjustably extending into the master cylinder assembly.

Claim 3 (Original): The shift control device of claim 2, wherein the push mechanism comprises a first latch segment and a push pawl biased toward the first latch segment and configured to cooperate with the first latch segment to rotate the rotating member in a first direction, and wherein the return mechanism comprises a second latch segment and a return pawl, the return pawl having a first claw and a second claw which alternately engage the second latch segment when the rotating member is rotating in the second direction.

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Claim 4 (Currently Amended): The shift control device of claim 3, further comprising:  
a pinion gear rotatable about the pivot shaft and operatively connected to the rotating member wherein the pinion gear rotates with the rotating member; and  
a rack gear engaged with the pinion gear and operatively connected to the master piston of the master cylinder assembly, wherein the rotation of the rotating member in the first direction corresponds to a movement of the master piston in a push direction and the rotation in the second direction corresponds to a movement of the master piston in a return direction.

Claim 5 (Currently Amended): The shift control device of claim 2 wherein the master cylinder assembly comprises a main chamber for the master primary piston and a secondary an adjuster chamber for the adjusting piston.

Claim 6 (Currently Amended): A method of adjusting an initial position of a slave piston in a hydraulic shift gear mechanism, comprising the steps of:  
providing a master cylinder assembly in communication with a slave cylinder assembly, the master master cylinder assembly attachable to a bicycle handlebar by a bracket and having a secondary an adjusting piston threadingly engaged therein; and

rotating the secondary adjusting piston to vary the depth in which the secondary adjusting piston extends into the master cylinder assembly.

Claim 7 (Currently Amended): A shift control device attachable to the handlebar of a bicycle for controlling the piston of a master cylinder adjusting a slave piston of a slave cylinder assembly of a hydraulic shift gear mechanism, the shift control device comprising:

- a bracket attachable to the handlebar;
- a pivot shaft spaced apart from the handlebar and fixedly secured to the bracket;
- a rotating member rotatable in a first direction and a second direction about the pivot shaft;
- a control lever operatively connected with the rotating member and biased in a neutral position;
- a push mechanism comprising a first latch segment and a push pawl biased toward the first latch segment and configured to cooperate with the first latch segment to rotate the rotating member in a first direction;
- a return mechanism comprising a second latch segment and a return pawl, the return pawl having a first claw and a second claw which alternately engage the second latch segment when the rotating member is rotating in the second direction;
- a pinion gear rotatable about the pivot shaft and operatively connected to the rotating member wherein the pinion gear rotates with the rotating member; **and**
- a rack gear engaged with the pinion gear and operatively connected to the piston of the master cylinder, wherein the rotation of the rotating member in the first direction corresponds to a movement of the piston in a push direction and the rotation in the second direction corresponds to a movement of the piston in a return direction;

a master cylinder assembly having a master piston connected to the push and the return mechanisms; and  
an adjusting piston adjustably extending into the master cylinder assembly.

**Claim 8 (Currently Amended):** A method of shifting gears in a hydraulic shift gear mechanism for a bicycle having a master piston and a master cylinder, comprising the steps of:

providing a shift control lever spaced apart from the handlebar, wherein the lever is biased in a neutral position and movable in a first direction and a second direction, and wherein the neutral position is between the first and second directions;

operating the lever in the first direction to control the motion of the master piston in a push direction;

operating the lever in the second direction to control the motion of the master piston in a return direction; and

wherein the control lever returns to the neutral position after operation.

**Claim 9 (Original):** The method of claim 8 wherein the first direction is the direction from the neutral position toward the handlebar, and the second direction is the direction from the neutral position away from the handlebar.

**Claim 10 (Currently Amended):** A hydraulic shift gear mechanism for a bicycle having a handlebar, the hydraulic shift gear mechanism comprising:

a control lever;

a positioning mechanism actuatable by the control lever, the positioning mechanism having:

a pivot shaft,

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          a rotating member rotatable about the pivot shaft;  
          a push mechanism configured to cooperate with and rotate the  
rotating member in a first direction;  
          a return mechanism configured to cooperate with and rotate the  
rotating member in a second direction;  
          a slave cylinder assembly;  
          a master cylinder assembly operatively connected to the rotating member  
of the positioning mechanism, the master cylinder assembly having a primary piston that  
is movable in a push direction when the rotating member rotates in a first direction and  
is movable in a return direction when the rotating member rotates in a second direction;  
          a conduit conveying a fluid between the master cylinder assembly and the  
slave cylinder assembly, the conduit having a volume; and  
          an adjuster piston threadingly engaged with the master cylinder assembly  
and operable to adjust the volume of the conduit.

Claims 11-14: Withdrawn.